

What is claimed is:

1. A method of forming an electrically active material,
5 comprising:

obtaining a silicon substrate;

forming a first material on said silicon substrate;

forming conductive layer on said first material, said
conductive layer formed of a electrically conductive, fully
10 oxidized, transition metal material combined with a SiO₂ which
is immiscible with said electrically conductive material, and
a ferroelectric layer, over said conducting layer;

directly connecting said ferroelectric layer to said
other material without a barrier layer therebetween; and

15 heating said device in high temperature environment
between 300 and 700 °C and oxidizing environment without
forming substantial oxidization in said material.

2. A method as in claim 1, wherein said material is a
20 dielectric material.

3. A device as in claim 1, wherein said electrical
material is formed by sputtering an oxygen containing gas at

least one target containing distinct sites of Ruthenium and
silicon.